

C.S.I. TELECOMMUNICATIONS

MICROWAVE AND RADIO SYSTEM ENGINEERS

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February 16, 1995

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Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554

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Re: WT Docket No. 94-148

Dear Mr. Caton:

In the above referenced Notice of Proposed Rule Making ("NPRM"), the Commission proposes to simplify the rules for Part 21 and Part 94 fixed microwave services and to consolidate those rules into a new part 101 so that they are "user Friendly".¹ Pursuant to Section 1.415 of the Commission's Rules,² C.S.I. Telecommunications³, hereby comments on the NPRM.

The Fixed Point to Point Communications Section, Network Equipment Division of the Telecommunications Industry Association ("TIA"), and the National Spectrum Managers Association ("NSMA"), are filing joint comments on the NPRM. In these comments, TIA and NSMA set forth their general support for the Commission's proposals.

TIA and NSMA also request that the Commission adopt certain other changes to the proposed Part 101 which would ensure that private and common carrier fixed point-to-point microwave licensees could continue serving the public interest. C.S. I. Telecommunications has been involved actively with TIA and NSMA in developing these proposals. It enthusiastically supports the proposals and urges their prompt adoption.

Specifically, TIA and NSMA propose that the Commission as part of the NPRM, revise the proposed rules so that: (i) private and common carrier fixed point-to-point users are treated the same; (ii) user-related rules, such as frequency coordination, interference protection, transition to a new Part 101, and construction, promote spectral efficiency and interference protection; and (iii) equipment-related rules, such as antenna standards and ATPC, reflect industry standards.

¹NPRM at paras. 1 and 21.

²47C.F.R. Section 1.415 (1989)

³C.S.I. Telecommunications is a telecommunications engineering firm specializing in microwave path analysis, and engineering for private and common carrier microwave systems.

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EQUAL TREATMENT FOR PRIVATE AND COMMON CARRIER USERS

Private and common carrier fixed point-to-point microwave users are unique in many ways. These differences must be preserved as much as possible in the Part 101 rules. Nevertheless, to fulfill the Commission's obligations in the NPRM, it is essential that both classes of users generally must be subject to the same technical standards:

- All technical rules governing Part 21 and Part 94 fixed point-to-point microwave users must be consolidated into the proposed Subpart C (Technical Standards). All technical rules either in Subpart H (Private Operational Fixed Microwave Service) or Subpart I (Point-to-Point Microwave Radio service) must be deleted. The frequency tables in Subpart H and Subpart I must be combined into a single table (the new Section 101.147 proposed by TIA/NSMA) in Subpart C.
- All non-technical rules applicable to private carrier and common carrier services, such as eligibility and permissible communications, must remain in Subparts H and I, respectively. In addition, Section 101.3 must be revised to include specific definitions for "Private Operational Fixed Point-to-Point Microwave Service" and for "Common Carrier Fixed Point-to-Point Microwave Service". Subparts H and I respectively, should be renamed accordingly.
- Private and common carriers must be subject to the same application, authorization, and construction rules. In the NPRM, the Commission does not propose such equal treatment. Private carriers should be: (i) eligible for temporary fixed authorizations in the same manner as common carriers are in the proposed Sections 101.715 and 101.717 (see proposed Section 101.31); (ii) subject to a single set of application content requirements, which must obligate the applicant to specify the equipment (including antennas) for its system in the application; and (iii) required to use the same application forms. Under Part 101, common carriers must be able to construct, but not operate, prior to licensing in the same manner as private carriers (which is proposed in pending CC Docket No. 93-2).

USER RELATED ISSUES

While proposals in Part 101 significantly improve the ability of users to operate in a spectrally efficient, interference-free environment, the Commission must clarify and revise certain of these proposals to optimize their utility:

- Standards for determining what constitutes a "major" amendment (Section 101.29) and for determining how to process modification applications (Sections 101.57, 101.59, 101.61) must be revised to reflect industry usage.
- The construction period for both private and common carriers should be 18 months instead of 12 months (Section 101.63). This increase is necessary to

protect licensees in the case of weather problems, funding issues for Local Governmental Agencies or in case of the anticipated shortage of resources (e.g., tower sites, construction crews, engineering consultants, and equipment) resulting from the influx of personal communications service ("PCS") applications and relocated 2 GHz fixed licensees.

- No transition period to the Part 101 rules is proposed, which is a serious oversight. In Part 101, substantive changes will be made to corresponding rules in Parts 21 and 94, such as interference protection, frequency coordination, digital loading standards, and antenna requirements. TIA and NSMA propose that the Commission establish an effective date for Part 101, and that all existing licensees or pending applicants (including applications for modifications and expansions) as of that date are grandfathered under parts 21 and 94.
- The proposed frequency coordination (Section 101.103), interference protection (Section 101.105) and frequency tolerance (Section 101.107) rules generally are acceptable. However the Commission must: (i) make it clear that the frequency coordination rules apply both to private and common carriers; (ii) prescribe interference resolution dispute mechanisms to safeguard users as PCS licenses increase ;(iii) permit relaxation of interference criteria if both parties consent (as is done currently under Section 94.15(b)(2); (iv) define the "practical threshold" for determining acceptable analog interference under Section 101.105(b), based upon Bulletin 10-F or any other suitable engineering standard; and (v) revise the frequency tolerance rule to include specifications for the 4, lower 6 and 11 GHz bands and for hetrodyne equipment.
- Minimum capacity and loading requirements must be revised. Analog modulation requirements must be specified. Digital modulation specifications must apply to frequencies below 19.7 GHz, instead of the 15 GHz threshold proposed in Section 101.141. Loading requirements must apply only to commercially available equipment. Voice channel loading requirements for digital transmission equipment must be eliminated.

EQUIPMENT ISSUES

The proposed part 101 rules encompass several equipment related issues. certain of these proposals must be revised:

- In Section 101.115 changes must be made to cover fixed stations operating at 900 MHz or higher and to clarify the requirements for antenna upgrades. In Section 101.117, antenna polarization must be defined to include only vertical or horizontal polarization, which is consistent with industry usage.
- The use of ATPC is an essential tool in maximizing the number of microwave systems that can be engineered in a particular geographic area. Unfortunately,

the Commission disagrees and does not propose using ATPC in Part 101. This decision is inappropriate. ATPC must be used based upon the guidelines established in TIA Bulletin 10-F. Using these industry guidelines, the maximum power would be specified in the license, but the licensee would have the option to reduce power to the extent necessary to optimize the number of paths that could be established. Most of the time, the user operates at the lower power and the maximum, licensed power is used only when necessary, such as during periods of inclement weather. Thus, the use of ATPC does not require any change in Commission record keeping, licensing or filing requirements. Permitting ATPC in Part 101, Subpart C, would make this vital tool available to private carriers for the first time.

- Station record keeping requirements must be retained to ensure proper operation and to facilitate problem resolution.

Adoption of a uniform set of rules for private and common carrier fixed point-to-point microwave licensees and applicants is timely and critical. These private and common carriers increasingly share many frequency bands, including five (5) bands above 3 GHz recently allocated to accommodate users which must relocate to clear spectrum for emerging technologies including PCS.

The Part 101 technical rules must be in place before PCS licenses are granted and before the 2 GHz users commence relocation. These rules are needed to guide how the former 2 GHz fixed licensees will operate in the new bands. If such rules are not in place, implementation of PCS could be delayed significantly due to a backlog of 2 GHz relocation applications, waiver requests by such applicants, and uncertainty over which rules apply.

In the Second Report and Order for ET Docket No. 92-9, when the Commission reallocated the bands above 3 GHz, it expressly postponed consideration of various permanent technical rules for Part 21 and Part 94 licensees⁴. The importance of adopting the technical recommendations made in the TIA/NSMA joint comments cannot be overemphasized. These rules should have been adopted in the Second Report and Order, but the Commission decided to wait until initiating the rulemaking for consolidating Parts 21 and 94. The entire fixed point-to-point microwave industry has relied on the Commission's promise to consider the technical proposals deferred from ET Docket 92-9 and has waited over 18 months for this opportunity to re-submit them.

⁴ Redevelopment of Spectrum to Encourage Innovation In the Use of New Telecommunications Technologies, Second Report and Order, ET Docket No. 92-9, 8FCC Rcd 6495, 6519-20 (1993) ("Second Report and Order"), modified, Memorandum Opinion and Order, 9FCC Rcd 1943 (1994).

Mr. William F. Caton
February 16, 1995
Page 5

With minor exceptions the TIA/NSMA proposals repeat the ET Docket 92-9 proposals and thus must be considered fully and adopted in this proceeding. Any further delay only would jeopardize the public interest by disrupting deployment of PCS, relocation of 2 GHz fixed microwave users, and continued availability of all fixed point-to-point microwave radio services.

Should there be any questions concerning these comments, please contact the undersigned

Sincerely,

C.S.I. TELECOMMUNICATIONS

A handwritten signature in cursive script, reading "Michael S. Newman".

Michael S. Newman
Vice President, Engineering

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